Fanny C. Hand

HISTORY AND DESCRIPTION

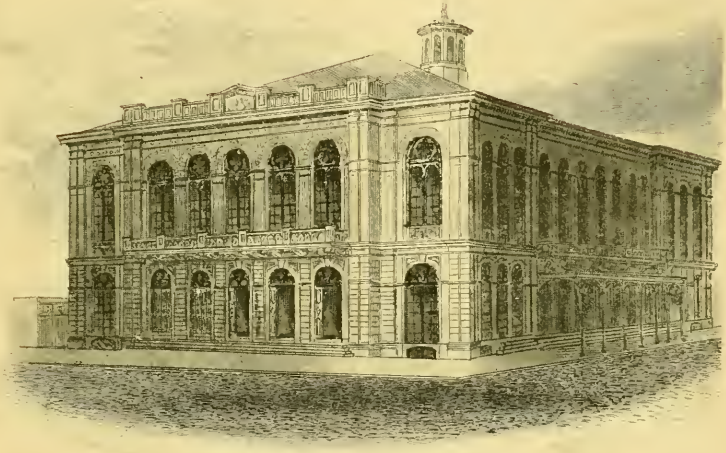
OF THE

OPERA HOUSE

OR

American Academy of Music,

In Philadelphia.



DESIGNED AND CONSTRUCTED BY

N. LE BRUN and G. RUNGE,

Architects.

Corner Stone laid on the 26th of July, 1855.
Building completed and opened on the 26th of January, 1857.

PHILADELPHIA:

G. ANDRÉ & CO. FOREIGN & AMERICAN MUSIC DEPOT,

306 Chestnut Street, above Eleventh.

Also for Sale at LEE & WALKER'S 188 Chestnut Street,
and BECK & LAWTON'S Seventh and Chestnut Sts.

HISTORY OF THE BUILDING.

THE inhabitants of the city of Philadelphia, so long as they have been known to the world, have always borne the reputation of being one of the most conscientious, sober-minded, and plain-thinking communities. Being originally a colony of Quakers, the spirit of these religious philosophers exercises, to the present day, its influence on the minds of the citizens in general. Thus it has happened, that, while the city was growing to a considerable size, and was taking its place in the ranks of the first commercial communities, its inhabitants still retained an excessive love for the cultivation of their firesides, and an indisposition to support places of public amusement.

However laudable this may be in one respect, it has certainly been productive of great disadvantages, morally and physically; for it was owing to this circumstance that those places of amusement which existed, and always will exist in a large community, were of an inferior kind, where sensual gratification was in more repute than mental refinement; so that an individual, whose natural inclination was in opposition to a quiet life at home, was placed in much greater danger of becoming demoralized, than if our citizens possessed some really respectable and well conducted public establishments.

It is only of late that a movement in this direction is noticeable; but, simultaneous with it, it became apparent to every interested person, that there was not a single theatre in Philadelphia, worthy to represent the intelligence and refinement of a city of over five hundred thousand inhabitants. All the principal points, viz.: spaciousness of accommodations, free exits, ventilation, etc., were sadly neglected; and it must be said, that up to the present moment, Philadelphia had not a single theatre in which a visitor could find anything equivalent to the comfort, cleanliness, and safety to which he was accustomed at home, to say nothing of the exhibition of those miserable farces, so frequently and impudently brought before the public, to the disgust

of every cultivated mind, and the demoralization of youth. At length, after several unsuccessful efforts had been made to raise funds necessary for the construction of a first class Opera-house, there appeared a pamphlet, (May, 1852,) setting forth the "Charter and Prospectus of the Opera-house, or American Academy of Music, in Philadelphia," with an appeal to our wealthy citizens to subscribe to the stock of the company, under conditions laid down in the charter.

A number of gentlemen were appointed commissioners to receive subscriptions, but so great was the difficulty they encountered, that they almost hopelessly renounced the task, when the present Board of Directors was formed, whose names will be given hereafter. Much praise is due to these gentlemen for their continued and persevering efforts to accomplish the object, as the sum required was large, and the general spirit of the citizens very reluctant. In the month of October, 1854, they published a notice to architects, inviting them to prepare plans for an Opera-house, to be erected at the south-west corner of Broad and Locust streets in the city of Philadelphia. The external dimensions of the building were to be 150 feet front on Broad street, by 238 feet depth on Locust street, of a simple but imposing style of architecture, the material to be brick, with brown stone or cast iron dressings, etc., etc.

As such an interesting problem is seldom offered to architects, there was great anxiety manifested among them, and the ablest artists from Philadelphia, New York, and Boston, entered the contest.

On the 15th of December, 1854, the several designs, fifteen in number, were received by the Building Committee, consisting of the following gentlemen:

JOHN B. BUDD,
President of the Board of Directors.
GEORGE S. PEPPER,
Chairman of the Building Committee.

Frederic Graff, James C. Hand,
Samuel Branson, John P. Steiner,

who, together with the following gentlemen, constituted the Board of Directors:

Charles H. Fisher, Lyon J. Levy,
Isaac S. Waterman, F. J. Dreer,
James Traquair, Fairman Rogers.

After a long and careful examination of the numerous plans, sections and elevations before them, the several architects having personally described their designs, the committee decided at last in favor of the one submitted by Messrs. N. Le Brun & G. Runge, architects of

Philadelphia, (on the 12th of February, 1855,) who were instructed immediately to prepare detailed drawings and specifications, so as to enable the Building Committee to take further active steps in the matter. Such was the care and scrutiny of these gentlemen, that a model was required to be made of the whole interior of the auditorium, in accordance with the plans and calculations of the architects, so as to perfectly demonstrate the qualities of the house in respect to the facility of vision.

This model was publicly exhibited in the Merchants' Exchange, (on the 20th of April, 1855,) and a renewed appeal made to the liberality of our citizens, the committee being determined not to enter into any contracts for the erection of the building, before the requisite amount of stock ($250,000) was fully made up.

This being at length accomplished, in spite of many difficulties, and the discouraging experience of similar enterprises in New York, proposals were invited, and a contract made with John D. Jones for the principal construction of the building.

The first spade was put into the ground on the 18th of June, 1855, and the corner-stone laid with the usual ceremonies on the 26th of July following. In a cavity formed in the stone were deposited the ordinary papers referring to the building, the newspapers of the day, the coins of the United States, and a silver plate with the following inscription:

AMERICAN ACADEMY OF MUSIC.

Corner-stone laid on the 26th of July, 1855.

Franklin Pierce, President of the United States.
James Pollock, Governor of the State of Pennsylvania.
Robert T. Conrad, Mayor of the City of Philadelphia.

DIRECTORS.

John B. Budd,
Charles Henry Fisher,
Geo. S. Pepper,
Frederick Graff,
James C. Hand,
Samuel Branson,
John P. Steiner,
Isaac S. Waterman,
James Traquair,
Lyon J. Levy,
F. J. Dreer,
Fairman Rogers.

N. Le Brun,
G. Runge, } *Architects.*

Charles Conard, *Superintendent.*

John D. Jones, *Contractor.*

After the stone was laid in its place, the Hon. R. T. Conrad, then Mayor of our city, made a short, but impressive speech, referring to the importance of the enterprise, and the beneficial results to be anticipated from it. During the Mayor's address, an incident worthy of notice occurred.

The clouds which had been gathering for some time in the heavens, and with occasional showers threatening to interrupt the ceremonies, suddenly cleared away, and a rainbow of resplendent beauty adorned the eastern sky. This was taken by many as a favourable omen, that the enterprise would be successfully carried through all its difficulties to a brilliant end.

The building then rapidly progressed, as no time was to be lost to place it under roof before winter would set in; and so great was the zeal and perseverance with which the work was carried on, that the walls were ready for the roof by the middle of December, and the whole building was covered in during the month of January, 1856.

But the construction and fitting up of the interior proved to be a work of a more tedious nature, as the auditorium, the stage, the large number of staircases, the ornamental columns and ceilings, the decoration, etc., were unusually complicated, and required much care and time. Never before was a building constructed in our city, (not excepting the Girard College,) which excited to so great a degree the curiosity and interest of the public. Many were the elaborate articles, descriptive of the building, which appeared in the Philadelphia and New York papers; and the desire of the public to examine the structure was so great, that the Building Committee had to pass unusually stringent resolutions in regard to the exclusion of visitors, whose presence tended to interfere with the operations of the workmen. This spirit of curiosity constantly increased until the day of opening, which was fixed for the 26th of January, 1857, and was celebrated by a magnificent ball, such as was never before witnessed in Philadelphia.

Thus this building was constructed and completed within the space of nineteen months; an incredibly short time, when its magnitude, its solid and perfect construction, and intricate arrangements are taken into consideration. May it stand for ages, a beneficial object and ornament to Philadelphia—a monument to the liberality of its citizens, the energy and perseverance of the Board of Directors and Building Committee, and the skill of the Architects!

DESCRIPTION OF THE BUILDING.

THE location of the "Opera-house," or "American Academy of Music," is at the S. W. corner of Broad and Locust streets, which, apart from other advantages, will be found to insure carriage accommodations of a first class character, a matter of paramount importance for all places of public entertainment. On Locust street, which is 50 feet in width, is the northern entrance,—additional facilities of approach have also been secured on the southern side, while its eastern or principal front extends along Broad street, a noble thoroughfare, (120 feet wide,) truly worthy of this stately monument of public enterprize.

THE ARCHITECTURE OF THE EXTERIOR,

is designed in the Italian Byzantine school, such as is frequently to be met with in the northern parts of Italy. Its character is massive and imposing, although exceedingly plain, with window frames shaped in a manner approaching the Gothic, which is peculiarly calculated to produce a pretty effect in the evenings when the interior of the building is illuminated.

The front of the first story on Broad street is composed of brown stone, as also the horizontal cornices, balconies, caps, bases, and keystones of the entire building, the upper or main cornice being of galvanized iron, painted in imitation of brown stone. The remaining portions of the exterior walls are faced with pressed bricks.

Communicating with the second story, on both the Broad street and Locust street fronts, are two balconies of unusually large dimensions, (78 feet 6 inches, and 74 feet 4 inches long, and 5 feet wide,) affording certainly as great a practical convenience to the interior, as they are an ornamental relief to the huge mass of the exterior.

The keystones over the five principal entrance doors on Broad street, are ornamented with carved symbolical heads. In the centre is Poetry, represented by Apollo; over the adjoining doors on either side, Music and Dancing, and at the extremes, Tragedy and Comedy

are severally personified. In the pediment over the centre of the main cornice on Broad street, is a lyre, ornamented with flowers, as an appropriate symbol for the Opera. The whole height of the fronts from the pavement is 60 feet. The width of the front on Broad street is 140 feet, the depth on Locust street 238 feet.

Entering through one of the five principal doors (each 9 feet wide) on Broad street, you find yourself in the

OUTER ENTRANCE HALL,

(73 *feet long,* 10 *feet wide, and* 18 *feet high,*)

the ceiling of which is handsomely arched, and in perfect harmony with the massive character of the exterior. Here are located the ticket offices at either end, and it is also intended to admit into this hall coachmen and servants awaiting the exit of the audience at the close of the performance. Crossing this hall, and passing through the opposite doors, you arrive at the

GRAND VESTIBULE,

(73 *feet long,* 27 *feet wide,* 18 *feet high,*)

constructed in a heavy Tuscan architecture, with arched doorways along both sides, and heavy pilasters between them, supporting the girders of the ceiling; the whole painted in imitation of various kinds of marble. At each end of the Vestibule, and leading to the first tier, is a magnificent stairway, 13 feet wide, of remarkably easy ascent. On each of the newelposts, at the foot of these staircases, is a large candelabrum, with elaborate gas fixtures, supporting small figures representing Mercury. They, together with the massive chandelier in the centre of the Vestibule, furnish ample means of lighting the room. On the first landings of the above named staircases, are spacious doors, connecting with the platforms of the second tier staircases, which start from the flank entrances, so that a communication of both tiers can be formed, if desired.

Adjoining the Grand Vestibule, is the spacious

LOBBY OF THE PARQUET,

which is at that point 13 feet wide, gradually narrowing towards the stage, on both sides of the auditorium, to the width of 9 feet at the furthest end. It is obvious, that such a construction is based on just principles, a corridor should widen in the direction of the current of the crowd, so that at every additional door, there would be a proportional width of passage; like a river, it would increase in width at the mouth of every additional stream.

In all the

LOBBIES, CORRIDORS, STAIRCASES, EXITS, ETC.,

every inch of space has been well calculated and apportioned to the number of people, which are expected to pass. It results from the same rule, that no staircase is allowed to accommodate more than one story; each of the upper stories having two complete staircases, which form an unbroken connection with the street. The several widths of them have been very carefully calculated, allowing at least one foot for every fifty persons; so that, supposing a story accommodates 600 persons, and has two staircases, the aggregate width of these staircases should be at least 600÷50, or 12 feet, or each staircase should be at least 6 feet wide,—all the stairways exceed this average.

The entrances to the second tier and the amphitheatre, with their ticket offices, are both on Locust street; and additional staircases and exits are provided for them on the south side. The decoration and fitting up of all these lobbies, corridors, and staircases, is chaste and appropriate; and the walls are painted in imitation of variegated marble.

Adjoining the Parquet Lobby, to the north, is an additional exit, communicating with the covered footway on Locust street.

PROMENADE CORRIDORS

are provided to all the other stories, on both sides of the house, effectually shutting off the noise from the streets, and forming a pleasant resort; especially the one on the north side, in the second story, which connects with the balcony on Locust street.

There are also communicating with the corridors, and accessible from the Parquet and first and second tiers, three

DRAWING-ROOMS,

(*each* 28 *feet long, and* 15 *feet wide,*)

neatly fitted up for the convenience and comfort of ladies; and on the opposite side is a spacious

SEMI-CIRCULAR STAIRWAY,

6 feet wide, connecting the three lower stories, whenever desired. In the front part of the second story, directly over the vestibulum, and outer entrance hall, and communicating with the first tier lobby, is the

GRAND FOYER, OR SALOON,

(84 *feet long,* 39 *feet wide, and* 33 *feet* 6 *inches high.*)

This saloon is decorated by sixteen Ionic columns, projecting from

both sides, supporting enriched broken entablatures; above which springs the groined arched ceiling, formed after the most celebrated Italian models. This room was originally intended to be frescoed, but, for various reasons, it has been deferred to some future day. Ten handsome glass chandeliers are suspended from the ceiling, in a manner peculiarly adapted to its architectural effect. There being no chandeliers in the centre, the room presents a beautiful perspective, which is materially aided by two large mirrors at the ends of the room, producing by their numberless reflections the effect of a gallery of infinite length.

This saloon besides being used for promenading between the acts, may also be employed independent of the theatre for parties, balls, and musical soirées, the staircases leading up to the second tier, being so arranged as to admit of their being used for this saloon exclusively, if required. The two corner rooms, in connection with this saloon, may be appropriated for retiring and refreshment rooms, and are in communication by means of the staircase with the

RESTAURANT,

(72 *feet* 6 *inches long*, 26 *feet wide, and* 10 *feet high*,)

in the basement, directly under the vestibule and the adjoining rooms, and accessible also from the corridor of the parquet, by large stairways at each end. This establishment is plainly, but comfortably fitted up, containing private roooms of various sizes, for the accommodation of supper parties, etc.

Returning to the first story lobby, and passing through one of the doors in the circular wall before you, you find yourself in the *Parquet circle* of the

AUDITORIUM,

(102 *feet* 6 *inches long*, 90 *feet wide, and* 70 *feet high*,)

which is certainly the most interesting part of the house. You are struck at once by the freedom of vision, spaciousness of passages, and comfort of accommodations. The seats, the size and shape of which has been very carefully studied, are provided with spring cushions and arms, covered with rich dark red plush. The seats are *not* made to lift up, as the advantages of that system have of late been questioned, and the construction adopted has been the result of mature deliberation.

Descending through the passage of the *Parquet circle* into the *Parquet* proper, which is divided off from the former by a continuous screen in front of it, you are enabled to enjoy a view of the whole

house. Your attention should be first drawn, however, to the floor of the Parquet, which is formed in a concave shape, favoring vision in an uncommon degree.

When required for balls or assemblies, the whole Parquet, together with the stage, can be covered over by a temporary level floor, thus forming a magnificent saloon of vast dimensions; the aggregate length from wall to wall being 175 feet.

On looking around, you perceive three balconies or tiers above the *Parquet circle;* directly over which is the *first tier*, with seats finished in the same manner as those below; over this is the *second tier*, provided with sofas without arms, and above the whole is the *amphitheatre*, where the seats are comfortable, but of a plainer description. In the rear of the first and second tiers are a number of private boxes, communicating directly with the corridor in the ordinary manner, and furnished with chairs.

The capacities of the several parts of the house are as follows:

First Class Seats.

Parquet Proper,	480	seats,
Parquet Circle,	580	"
First Tier Balcony,	408	"
First Tier Boxes,	128	"
Six first class Proscenium Boxes,	96	"
Total	1692	seats.

Second Class Seats.

Second Tier Balcony,	424	seats.
Second Tier Boxes,	134	"
Two second class Proscenium boxes,	32	"
Total,	590	seats.

Third Class Seats.

Amphitheatre,	618	seats.

which, in the aggregate, makes a total of 2900 seats; which is quite a large number, considering the size of the house, taken in connection with the ample accommodations afforded each person. There is besides standing room for about 600 persons.

The following table of the most renowned European theatres, gives the several depths of Auditorium, from the curtain to the opposite wall:

La Scala, Milan,	112 feet.
San Carlo, Naples,	110 "
Opera at Moscow,	105 "
Opera at Munich,	102 "
Opera at St. Petersburg,	97 "
Opera at Berlin,	93 "
Opera at Paris,	92 "
La Fenice, in Venice,	90 "
Opera at Vienna,	70 "
Opera at Copenhagen,	68 "
Philadelphia Academy of Music,	102 feet, 6 in.

The reports about the capacities of European Opera-houses, are generally very vague, especially those referring to the two Italian theatres, so commonly quoted, viz: the La Scala at Milan, and the San Carlo at Naples, they being arranged with private boxes all over the house, each having a level floor, where chairs and stools are placed promiscuously, so that there can be no accurate estimate as to the exact number of persons which a box would accommodate. Thus it may be said, that these theatres are capable of holding 4000 persons, but it seems extremely doubtful, whether their accommodations would be very comfortable. The average number of seats in the larger class of European Opera-houses is only 2000, which seems to be considered a reasonable standard.

The balconies in our auditorium are supported by light cast iron columns, considerably receding, and thus not calculated to obstruct the view as much as if they stood directly under the fronts. At the same time this arrangement affords an opportunity to make the front of each higher tier recede from the lower one; thus giving to the whole auditorium a fine amphitheatrical appearance.

It would be well here, to say a few words in reference to the arrangement of the platforms in the several tiers, on which the seats are placed. Nothing has been left undone, to facilitate vision in all parts of the house, the plan itself has been governed by it, and the fronts of the several tiers diverge as well as decline more or less towards the stage, in such a manner, that the eye is not offended. The elevations of the platforms being considerable, (especially in the two upper tiers,) the object has been completely gained, there not being a single seat in any part of the house, from which a satisfactory view of the stage cannot be obtained.

The *Proscenium*, or that portion of the house which forms the link between stage and audience, and a rich architectural frame to the scenic representations, is arranged in a rather novel manner, viz:

Two Corinthian columns, standing apparently free, support the Proscenium architrave behind which the curtain is suspended, and four other columns of the same order are placed in front of the Proscenium boxes on both sides, which contain balconies, corresponding to the fronts of the adjoining tiers. The style of architecture is a florid renaissance, rich and effective, without being overloaded with ornaments. Over the entablatures of those columns are placed four collossal caryatides, representing kneeling giants, supporting the arched pediments over the Proscenium boxes. Under these pediments, at the right and left of the stage opening, are sculptured the arms of the city and state in bold relief, and below them are the keystones of the lower arches, in the shape of two masks, representing Tragedy and Comedy. The ornamentation of the rest of the proscenium boxes, and fronts of the several tiers, consists of various embellishments, such as are usual in Opera-houses, viz: festoons, tripods, griffons, shells, musical instruments, pearl strings, etc., etc. Over the centre of the Proscenium architrave is a medallion with a bas-relief portrait of Mozart, over which there are two reclining figures, representing Poetry and Music. All the sculptural ornaments have been carved in wood, in accordance with the substantial character which pervades the whole structure. The prevailing color of the wood work is of a cream tint, occasionally relieved with gilding, which, together with the rich crimson paper of the walls, and the dark red plush covering of the seats, presents a very fine appearance.

The immense drop curtains (each 50 feet square,) deserve particular notice. The first drop consists of rich crimson drapery, ornamented with heavy golden fringes, ropes, tassels, etc., designed and executed by J. R. Martin, the scene painter, who came here from Berlin, to paint the architectural scenes. The second, or entre act, drop is a beautiful landscape, representing a view on the Lake of Como, so renowned for its charming scenery, painted by Russel Smith, our native artist, whose skill and taste are already fully known and justly appreciated by our citizens.

The ceiling is likewise remarkable for the skill, taste, and labor bestowed upon it. The design and fresco work was executed by Mr. C. Kaiser, and the pannels filled with beautiful oil-paintings, by Mr. C. Schmolze, representing the following subjects:

In the pannel next to the stage, is Poetry and Music, represented by Apollo, Erato, the muse of love-songs, and Euterpe, the muse of mental enjoyment.

In the southern pannel is Comedy, represented by Bacchus, Thalia, the muse of comedy, and Momus, the god of mockery.

In the eastern pannel, opposite the stage, is Tragedy, represented by Minerva, Melpomene, the muse of tragedy, and Clio, the muse of history.

In the northern pannel is Dancing, represented by Mercurius, Terpsichore, the muse of dancing, and Aglaia, one of the graces.

The four diagonal elliptical pannels are filled with representations of the seasons. Spring, represented by a girl with flowers; Summer, by a boy with a sheaf and scythe; Autumn, by a boy with fruit, and Winter by another wrapped in drapery, and carrying a holly tree.

In the centre of the inner dome, which is ornamented with stars, hangs the immense glass chandelier, with 240 burners. Over the tops of the uppermost iron columns, which support the ceiling, are clusters of gas burners, and against the walls of the several tiers, are also handsome triple gas brackets, which at the same time materially aid in the

VENTILATION

of the house. Over each of these gas brackets, is an opening into one of the spacious ventilating flues, which are 20 in number, carried up perpendicularly the whole height of the wall, widening toward the top, at every additional register.

These flues are conducted by means of shafts into the main ventilator, which is directly over the chandelier, communicating with the octagonal cupola on the top of the roof. In this manner a very effective draught is secured, the air being carried off in the auditorium just at those places, where it is the most apt to become vitiated, and at the same time removing the heat produced by the gasburners. Fresh air, heated if necessary by steampipe chambers, is forced through judiciously distributed apertures in the several floors, by means of a revolving fan blower in the basement, the supply of air being brought down from the roof by a large air shaft, so that the air thus obtained is always pure.

In this manner, by forcibly driving in pure air, and drawing out the vitiated air, so perfect a degree of ventilation is secured, that it only requires some restrictive regulations, to make it answer every desired purpose in winter; and in summer cool air can be forced in by similar means. The same system of ventilation is also carried out in the saloon. The

HEATING

of the whole building is effected by steam, conducted in pipes throughout its entire extent. As much attention has been devoted to this subject, and the most experienced agents employed in its construction, no evil effects, noise, etc., need be anticipated. The artificial

warmth, derived in this way, is exceedingly pleasant, and not accompanied by any impure or unhealthy air, as is generally the case with the heat from the usual warm air furnaces. The

CONSTRUCTION

of the building is unusually substantial, the soil supporting it is excellent, the foundation massive, and the strength of the upper walls very remarkable. The thickness of the auditorium walls has often been the subject of commendation. They stand free, 70 feet high, destined to bear an audience of 3000 persons, to support the heavy frames of a roof, 90 feet in span, and are moreover perforated by numerous doors, and spacious ventilating flues.

The architects had the great satisfaction to find, that not the slightest crack or irregular settlement took place throughout the whole building, although there were certainly unusual feats of construction to be performed. The great proscenium, or stage opening, deserves particular notice. A colossal arch of brick work, 3 feet in thickness, spans this vast space, 58 feet in width, at an elevation of 52 feet from the foundation.

The brick work rests upon two iron arches, each cast in a single piece, measuring 70 feet along the curve, and provided with 6 wrought iron ties. The wall over this arch is continued up through the roof, so that in the event of a fire occurring on the stage, it could not communicate with the roof of the front, or eastern part of the building.

The ceiling of the auditorium is constructed of wrought iron ribs, suspended from the timber frames of the roof. To these ribs a wire net-work is fastened, on which the plaster is laid, thus forming a ceiling which will not be subject to cracking, and the shape of which allows the expansion and contraction of the metal, without injury to the plaster, at the same time giving just such a surface, as would be desirable for the effect of sound. This leads us to the consideration of the science of

ACOUSTICS;

the most approved principles and theories of which, have been carefully studied and applied to this building. The popular ideas entertained on this subject are generally very vague and indistinct. If a room turns out to be well or ill adapted for sound, some persons ascribe it to mere accident, while others give the credit or blame entirely to the architect. Both are greatly at fault. The fact is, that the architect, who has properly applied himself to this branch of his profession, can certainly do a great deal towards the accomplishment

of his object, especially if his study is founded upon practical experience, combined with the observations and results deducted from other buildings of a similar nature. This, however, gives no complete guarantee; and it must be acknowledged that there always remains something left to chance. But to contend upon this ground, that the result is in every case accidental, would be little better than to hold, that a practised marksman, in hitting his object, owed all to chance, and nothing to skill—because, forsooth, he might by possibility have missed it.

A most interesting illustration of the foregoing observations is to be found in the construction of the floor of the orchestra. Extending underneath it is an inverted barrel vault, formed of plank arches, plastered over; below which is a solidly walled trench, five feet deep, paved with hard bricks, in a curved shape, forming a powerfully resounding surface. The floor itself, which is light and elastic, has a slight declivity toward the parquet; and the whole, combined with the solid stage front, has a tendency to reflect the sound into the auditorium, so that but little will be lost upon the stage.

The floor of the parquet rests on as few supporting walls as possible and has underneath the centre a countervaulted sounding well, walled in with bricks, 12 feet deep and 20 feet in diameter. The whole area, which extends under the parquet, and parquet circle is also paved with hard bricks. All these arrangements are highly important as a means of securing a good resonance.

In order to conduct the sound and impart to it a peculiar mellowness, the auditorium walls are lined with thin pine boards, which to a certain extent acts as a preventative against echoes. The greatest point however to attain the desired object is to be found in adopting a peculiar *curve* to the walls enclosing the auditorium, which will give the greatest security *against* any concentrations or *knots* of sound; —this has been done after very laborious calculations made with experimental diagrams.

It is to be desired that this interesting subject should be more elaborately treated by some experienced and scientific architect, who could fully set forth and substantiate the mere theoretical views heretofore given, so that they might be practically applied.

The ceiling is, as above stated, made of light iron ribs, covered with a wire network and plastering, possessing very limited resounding qualities. This is in contradiction to some authorities, who contend, that the ceiling should be constructed as a reflector of sound; but experience has proved, that in many cases, where such a practice had been followed, the resonance had subsequently to be deadened

by suspending canvass under it, as instanced in the Italian Opera-house at Paris.

The result of the whole arrangement in regard to acoustics, as far as could be ascertained from experiments made, has proved highly satisfactory. A person sitting on the back seat of the uppermost gallery, could clearly understand every word spoken on the stage in the ordinary tone of voice without the slightest perceptible echo.

The

STAGE,

(72 *feet* 6 *inches deep,* 90 *feet wide, and* 70 *feet high,*)

has been constructed in a very superior manner, there being underneath it besides a 10 feet basement for the machinery of the traps, etc., also a large excavation, 36 by 34 feet, and 15 feet deeper than the floor of the basement, making a total depth of 25 feet, so as to enable the sinking of whole scenes, &c., through the floor of the stage. The declivity of the stage floor toward the auditorium is one foot in 30 feet, or 2-5 of an inch to the foot.

On the north side of the stage, is the

GREENROOM,

(42 *feet long,* 19 *feet wide, and* 12 *feet high,*)

arranged as a handsome parlor, and used as place of rendezvous for actors, from which they are called to appear on the stage. Adjoining this is the *entrance hall* from Locust street, containing the staircase, and beyond this the *Stage Manager's office.* The second and third stories are devoted to *dressing-rooms,* and the fourth and fifth stories to *tailors' rooms* and *wardrobes.*

Connected with the third story is the principal

RIGGING GALLERY,

(72 *feet long and* 13 *feet wide,*)

to which all the ropes of the suspended scenery are attached. In the N. E. corner is a winding staircase leading to the rigging floor under the roof, 70 feet above the stage, from which all the drops and borders of the scenes are suspended. Ascending another small staircase in the opposite corner, you enter the *painters' room,* extending along the back wall, and at an elevation of 32 feet from the stage. This room is 22 feet wide, and has two immense frames suspended on either side, on which the canvass is stretched. These frames are suspended on counter balancing weights, and are moved upwards or downwards by means of cranks, thus enabling the artist to work over every portion of the canvass, and still remain on the same floor. Adjoining

the painters' room on the south side, is the carpenter shop which is built fire-proof, with an iron framed roof, covered with corrugated galvanized sheets. At present, this room is also temporarily occupied for scene painting, the canvass being tacked to the floor, to facilitate the operations of the artist. This system, of painting on the canvass laid out on the floor, is followed on the continent of Europe. Descending through the other door of the first mentioned painters' room, you alight on the rigging floor of the south side of the stage, which is, however, less frequently used than the other; and the remainder of the building on that side, contains *property-rooms*, a number of first class *dressing-rooms*, with bath-rooms, wash basins, and other conveniences; a *scene magazine* on a level with the stage floor, and adjoining this, the large southern *stage entrance*, 25 feet high and 10 feet wide, for the admission of very large objects, carriages, horses, etc., which would be introduced from Westmoreland street.

The basement on both sides of the stage department is allotted to the supernumeraries, here also is a portion of the dwelling for the stage carpenter. Under the lobbies and corridors of the parquet are placed the ventilating fan, engine, pump, and boiler-rooms, the latter being, however, in a separate vault, outside the building. From these boilers the steam is conducted over the entire building, and the aggregate length of steam pipes is estimated at over six miles. The small engine for driving the fan wheel, and a very superior steam-pump of the Worthington patent, derive their supply of steam from these boilers. The ordinary purpose of this pump is merely to keep a large reservoir under the roof constantly filled with water, and to pump back into the boilers the water from the condensed steam, which runs out of the pipes into a small well. In the event of an accident from fire, however, this pump would be powerful enough to be of very efficient service. Hose attachments are in every story, and the whole arrangement, in connection with the water reservoir, above mentioned, the fire-proof wall over the stage opening, the width of passages and staircases, etc., insures extraordinary safety to the building.

Having thus given a full description of all parts and qualities of the house, the public may form their own judgment as to its merits. Certain it is, that the Directors and Architects have already had the gratification to hear, that the best authorities, (American as well as European,) who have examined the house, have unanimously expressed themselves in the warmest terms of approbation; and it may be also safely asserted, that in the following points, this building stands positively unrivalled, viz:

1st. Facilities of exit from all parts of the house.

2d. Perfect vision throughout the auditorium. And

3d. Perfect ventilation.

As regards the acoustic properties, we cannot as yet make any positive assertions, until we shall have witnessed the first operatic representation in presence of a crowded audience, but we look forward to the realization of our brightest anticipations, namely, that in *every* respect, our Opera-house will stand comparison with any theatre in the world, and in *many* respects excel them all.

PHILADELPHIA, January 26, 1857.

The following is a list of the contractors, mechanics, and artists, who were engaged in the building under the direction of the Building Committee and the Architects:

Charles Conard, *Superintendent,*
John D. Jones, *General Contractor and Carpenter.*

J. A. Johnson for Stage Building,
J. J. Walworth & Co. for Steam-heating and Ventilation,
Wm. H. Dale for Digging,
Lukens & Drake for Stone work,
Dougherty & Smith for Brown stone work,
Jones & Fox for Brick work,
Wm. Stewart for Plastering,
John Matlack for Framing of the roof.
M'Cullough & Co. for Galvanized Iron Roofing,
Oram & Co. for Cast Iron,
Thomas Armitage for Smithery,
Robert Wood for Awning and Railings,
Baylis & Darby for Wirework,
J. Blair for Stair Builder,
John Gibson for Painter and Glazier,
Wright, Hunter, & Co. for Plumbing,
Archer & Warner for Gasfitting,
Cornelius, Baker, & Co. for Chandeliers and Fixtures,
S. P. Rush for Seats,
Edward Burke for Upholstery.

Chas. Busher & Bailly for Carved Wood work,
Const. Kaiser & Co. for Ornamental Painting,
Chas. H. Schmolze for Oil Paintings on the ceiling of the Auditorium.

Russel Smith,
John R. Martin, from Berlin, } Scene Painting.
Ed. Rivière, from Brussels,